

IN THE DRAWINGS

The attached sheet of drawings includes new Fig. 9.

Attachment: 1 New Drawing Sheet

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

The Title is amended to be more clearly descriptive of the claimed invention.

Claims 1-20 are pending in this application. Claims 1-4, 6-8, 10-13 and 17 are amended by the present response to correct minor informalities and to better comply with U.S. claim drafting practice. Applicant therefore submits that no new matter is introduced.

Initially, Applicant respectfully requests that the Examiner acknowledge the claim for foreign priority under 35 U.S.C. § 119 for Japanese Patent Application No. 2002-241940, filed on August 22, 2002. A Request for Priority under 35 U.S.C. § 119 was filed on December 9, 2003, and the Application Data Sheet lists the foreign priority information.

In the outstanding Office Action, the drawings were objected to under 37 CFR 1.83(a). Claims 1-3, 5, 7, 9, 11-13, 15, 17 and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 6,535,317 to Ishibe in view of U.S. Patent 6,756,583 to Yamawaki. Claims 4, 6, 8, 10, 14, 16, 18 and 20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ishibe in view of Yamawaki, and further in view of U.S. Patent 5,963,240 to Shinohara et al. (herein "Shinohara").

Addressing first the objection to the drawings, that objection is traversed by the present response.

Filed with the present response is new Fig. 9. The drawings including Fig. 9 show every feature of the invention specified in the claims. The specification is amended to include a brief description of Fig. 9 and a disclosure referring to Fig. 9. The submission of that figure and the amended specification as noted above are believed to address the objection to the drawings.

Further, Applicant submits that the submission of new Fig. 9 and the amended specification as noted above do not raise issues of new matter as the features therein are

supported by original Claim 11 and the specification at page 9, line 4 through page 11, line 23, for example.

In this regard, it is noted however, contrary to the assertion in the Office Action that the image carrier and the optical writing means are not shown in the drawings, that the image carrier 10 is shown in original Fig. 1; and that the optical writing means is implemented as a multiple-beam scanning device shown in original Figs. 1 and 2 as described in the specification at page 7, line 25 to page 8, line 13, and page 9, lines 9 and 10.

Addressing now the rejection of Claims 1-3, 5, 7, 9, 11-13, 15, 17 and 19 under 35 U.S.C. § 103(a) as unpatentable over Ishibe in view of Yamawaki, that rejection is traversed by the present response.

Independent Claim 1 recites, among other features, as follows:

an adjusting device configured to provide, in a plane formed by scanning lines deflected by said deflector, one of said optical devices with α eccentricity about a center of an optical axis in a direction of said optical axis.

Referring to the non-limiting embodiment of the present invention shown in Figs. 5A and 5B, the adjusting device recited in Claim 1 is implemented as eccentric cams 9a and 9b. The eccentric cams 9a and 9b are positioned at opposite ends of the cylindrical lens 7 and can be rotated or adjusted independently of each other. More specifically, the eccentric cams 9a and 9b each are rotated by a particular amount to thereby provide the cylindrical lens 7 with α eccentricity about a center of an optical axis of the cylindrical lens 7 in a direction of the optical axis.¹ Accordingly, by adjusting an angle of the cylindrical lens 7 with respect to the optical axis, a beam pitch is efficiently and effectively adjusted to obtain a desired beam pitch. In other words, because the eccentric cams 9a and 9b provide such an adjustment to the angle of the cylindrical lens 7, the adjustment is effectively provided when desired; for example,

¹ See the present specification at page 14, lines 5-15, for example.

when fluctuation of temperature occurs in the image forming apparatus while operated and causes a refractive index of the cylindrical lens 7 to be irregular.²

Applicant respectfully submits Claim 1 as currently written clearly distinguishes over the applied art.

With respect to the primary reference to Ishibe, the Office Action asserts that the arrow D with the indication of 20' as shown in Fig. 1A teaches the above feature of the "adjusting device" recited in Claim 1 while admitting that the "adjusting device" is not shown in the figures in Ishibe.³ However, the arrow D merely indicates a position of the second toric lens 7 that is inclined by 20'. In this regard, it is described in Ishibe that "the second toric lens 7 is inclined by 20' (20 minutes) in the direction of arrow D in the figure toward the surface to be scanned 8 about point C on the optical axis of the lens 7."⁴

Nowhere does Ishibe teach or suggest the "adjusting device" configured to provide, in a plane formed by scanning lines deflected by said deflector, one of said optical devices with α eccentricity about a center of an optical axis in a direction of said optical axis, as recited in Claim 1. Further, though it is described in Ishibe that the angle of inclination of the second toric lens 7 can be decreased depending on setting of power layout of the first and second toric lenses, any adjusting device that enables an adjustment of the angle is not disclosed.⁵ Thus, it is clear that the features as recited in Claim 1 of the present application are patentably distinguishable over Ishibe.

Moreover, teachings of Yamawaki cannot overcome the above-noted deficiencies in Ishibe. Yamawaki teaches a support method of the elongated cylindrical lens 11 as shown in

² See the present specification at page 15, lines 6-21, and page 16, lines 3-23, for example.

³ See the outstanding Office Action at page 3, the fifth line from the bottom.

⁴ See Ishibe at column 7, lines 35-43, column 8, lines 57-65, and column 14, lines 16-22, for example.

⁵ See Ishibe at column 9, lines 32-41.

Figs. 7A-7C.⁶ Specifically, the support method is described, for example, at column 14, lines 13-21 as follows:

The vertical direction (the sub scan direction) T of the elongated cylindrical lens 11 is determined when two projections 15 arranged on both ends of the elongated cylindrical lens 11 abut the seats of the housing 25. To fix the elongated cylindrical lens 11, spring members (not shown) urge the elongated cylindrical lens 11 at position alignment members 15, 16, and 17 in directions represented by arrows 20 and 21. In the first embodiment, the elongated cylindrical lens 11 is supported at a total of four points.

Accordingly, an angle of the elongated cylindrical lens 11 with respect to an optical axis thereof cannot be adjusted. Nowhere does Yamawaki teach or suggest the “adjusting device” configured to provide, in a plane formed by scanning lines deflected by said deflector, one of said optical devices with α eccentricity about a center of an optical axis in a direction of said optical axis, as recited in Claim 1 of the present application.

Thus, Claim 1 as currently written is believed to clearly distinguish over Ishibe in view of Yamawaki. Applicant therefore respectfully requests the withdrawal of the rejection of independent Claim 1.

Independent Claim 11 is considered allowable at least for the reasons advanced for Claim 1 to the extent that Claim 11 includes features substantially similar to those recited in Claim 1.

Claims 2-10 and 12-20 are considered allowable at least for the reasons advanced for Claims 1 and 11 from which they depend, respectively.

Applicant also draws attention to dependent Claim 2 which is believed to even further distinguish over the applied art.

Claim 2 recites as follows:

⁶ See Yamawaki at column 13, line 47 to column 14, line 42.

said adjusting device configured to adjust a position of said one of said optical devices ***in parallel*** to the direction of the optical axis in the plane formed by the scanning lines.

Similarly to the earlier discussion, neither Ishibe nor Yamawaki teaches or suggests the “adjusting device” configured to adjust a position of said one of said optical devices in parallel to the direction of the optical axis in the plane formed by the scanning lines, as recited in Claim 2.

Claim 12 is further considered allowable for the reasons advanced for Claim 2 to the extent that Claim 12 includes features substantially similar to those recited in Claim 2.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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